



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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Cortland, NY 13045



March 5, 2002

Colonel John B. O'Dowd
District Engineer, New York District
U.S. Army Corps of Engineers
26 Federal Plaza
New York, NY 10278-0090

Attention: Ms. Heidi Firstencel, Troy, New York

Dear Colonel O'Dowd:

The following comments represent the position of the U.S. Fish and Wildlife Service (Service) on the Millennium Pipeline Project as discussed during the February 13, 2002, meeting with the U.S. Army Corps of Engineers (Corps), Federal Energy Regulatory Commission (FERC), and National Marine Fisheries Service (NMFS). The Project would include construction of approximately 424 miles of 24- and 36-inch diameter pipeline and associated above-ground facilities extending from the U.S.-Canadian border in Lake Erie to Mount Vernon, Westchester County, New York.

In letters dated April 28, 2000, and May 23, 2000, the Service recommended that the Corps deny Millennium's Section 404 permit because the project would result in substantial and unacceptable affects to aquatic resources of National importance, as defined in paragraph one, Part IV, of the 1992 Memorandum of Agreement between the Department of the Interior and the Department of the Army regarding Section 404(q) of the Clean Water Act. The Service, after reviewing the Supplemental Draft Environmental Impact Statement (SDEIS) and the Final Environmental Impact Statement (FEIS), maintains this recommendation for the reasons described below.

Lake Erie

In our response to the SDEIS and the FEIS dated April 27, 2001, and November 7, 2001, we recommended that the Lake Erie crossing be avoided if another feasible alternative with fewer environmental impacts was available. The proposed project may increase turbidity and sedimentation, disrupt fish migration in Lake Erie during construction, potentially disrupt benthic fauna, and cause mortality to aquatic species in the event of leaks or pipeline rupture.

There is a limited amount of information on the specific effects of leaks and pipeline failure on aquatic organisms. Most of the research and testing has been done in marine systems and a literature review has been summarized in Patin (1999). Fish and aquatic invertebrate mortality could result from pipeline failure. In addition to direct mortality resulting from a rupture,

methane has been shown to have some toxic effects on aquatic organisms. Medium to heavy methane intoxication affects the nervous and cardiovascular system in fish and can result in irreversible damage to the cerebrum and heart tissue and leukocytosis. Millennium has indicated that any gas released in Lake Erie would bubble to the surface and quickly dissipate. We agree that methane is relatively insoluble in water compared to gases such as carbon dioxide and oxygen, but data collected after accidental gas blowouts in the Sea of Asov in 1982 and 1985 indicated that fish suffered abnormalities indicative of acute poisoning such as impaired coordination, pathologies of organs and tissues, and modifications of protein synthesis that were similar to anomalies found in test fish kept for 4 to 5 days in cages near the blowout site (Patin 1999). Elevated methane levels were detected in the water column at least 500 meters from the blowout area. In laboratory tests avoidance effects were observed at methane concentrations between 0.1 and 0.5 milligrams/liter (mg/l) and fish mortality between 1 and 3 mg/l. The FEIS did not cite any of the above information and did not fully state the potential impacts to Lake Erie that would result from a significant leak or rupture.

The FEIS presents the rates of failures for 300,000 miles of natural gas pipeline and these rates of failure are relatively low. The risk of failure in Lake Erie may be greater than average because that portion of the pipeline under the lake would only be inspected every 3 years as opposed to annual inspections in populated areas. Response times to repair leaks or ruptures would be considerably longer than to repair terrestrial leaks or ruptures. Because the depth that the pipeline would be buried was determined by the 100-year ice scour depth, there is a 20% chance that the pipeline would be damaged at some point during its 20-year life. Millennium is relying on natural processes to backfill the trench; the pipeline would not be fully protected until the trench is filled. The FEIS states that much of the backfilling will have occurred by the spring following construction, but also states that ice scour scars (which bear some resemblance to the proposed pipeline trench) persist for decades. Therefore, it is likely that at least portions of the trench will not fill in quickly and the pipeline may be vulnerable to scour for some longer period of time.

The impacts to aquatic organisms from leaks or ruptures in Lake Erie could vary considerably with location, depth, time of year, water temperature, and dissolved oxygen. We request that the FERC and the Corps assess the impacts of a "worst case" scenario with respect to the volume of gas released, manner of release (rupture versus leakage), and repair response time. Given the potential impacts, we repeat our request for wetland and waterbody impact assessments of alternatives described in the FEIS that bypass Lake Erie to determine if the Lake Erie crossing is the least environmentally damaging practicable alternative.

If the Lake Erie crossing is permitted, we recommend additional measures to reduce impacts. Millennium states that recovering drilling fluids released during the directional drill of the nearshore area is unnecessary. The FEIS says the resulting bentonite plume could cover several square miles. The Service believes that the release of drilling muds into Lake Erie should be avoided and that Millennium should be required to recapture drilling muds before they are released into the water column.

Hudson River

The Millennium Pipeline is proposed to cross the Hudson River at Haverstraw Bay. Haverstraw Bay is classified as a Significant Coastal Habitat Complex (USFWS 1997) and provides habitat for the Federally-listed endangered shortnose sturgeon (*Acipenser brevirostrum*). The Bay provides habitat for a variety of fish species such as striped bass (*Morone saxatilis*), American eel (*Anguila rostrata*), Atlantic tomcod (*Microgadus tomcod*), American shad (*Alosa sapidissima*), and blueback herring (*Alosa aestivalis*). The Bay also provides important wintering habitat for bird species such as black duck (*Anas rubripes*), Canada goose (*Branta canadensis*), canvasback (*Aythya valisneria*), and the Federally-listed threatened bald eagle (*Haliaeetus leucocephalus*).

In addition to the temporary impacts resulting during construction that were documented in the FEIS, other potential impacts could result from pipeline leaks or ruptures. Negative effects to aquatic organisms may be similar to those described above for Lake Erie. Although the response time for repair crews would likely be faster as the Bay is narrower and shallower than Lake Erie and ice is less likely to impair repair efforts, the concentrations of aquatic resources is likely to be much higher and greater numbers of organisms could be affected by comparable accidents. The Service recommends that the Corps and FERC assess the potential impacts resulting from a "worst case" pipeline accident in Haverstraw Bay.

The Service believes that the proposed crossing at Haverstraw Bay should be avoided and an alternative with fewer impacts selected. We maintain that a "one pipe" alternative to the Eastchester pipeline and the portion of the Millennium pipeline east of the Hudson River should be developed to deliver the necessary gas volumes to New York City markets and reduce environmental impacts. If a crossing of the Hudson River is necessary, the Service repeats our request written in response to the SDEIS and the FEIS, that the Corps and the FERC evaluate the wetland impacts of the Hudson North and Tappan Zee alternatives and determine which route would be the least environmentally damaging practicable alternative.

Threatened and Endangered Species

The Service has made a "not likely to adversely affect" determination for five of the six Federally-listed species under our jurisdiction. These include bald eagle (*Haliaeetus leucocephalus*), northern riffleshell (*Epioblasma torulosa*), clubshell (*Pleurobema clava*), dwarf wedge mussel (*Alismodonta heterodon*), and northern wild monkshood (*Aconitum noveboracense*). The Service has not issued a "not likely to adversely affect" determination for the Federally-listed threatened bog turtle (*Clemmys muhlenbergii*). In letters dated March 20 and July 17, 2001, written in response to the Biological Assessment (BA) and supplemental survey results, and in our responses to the SDEIS and the FEIS, the Service has requested updated alignment sheets that indicate that the Millennium Pipeline Project will avoid impacts to Wetland 9 (as designated in the BA), which contains habitat that may be suitable for the Federally-listed bog turtle.

Wetland Mitigation

Millennium has submitted a wetland mitigation plan that includes the purchase of wetlands in Orange County and Cattaraugus County, New York. Under the plan, Millennium would purchase 495 acres in Cattaraugus County (approximately 190 acres of forested wetland, 2 acres of forested/scrub-shrub wetland, 26 acres of emergent wetland, 2 acres of open water, and 276 acres of upland habitat) and 197 acres in Orange County (approximately 161 acres of forested wetland, 27 acres of emergent/forested wetland, and 9 acres of emergent wetland). Millennium proposes to transfer ownership of the property to New York State for management under their public lands program. This plan is unlikely to completely replace the functions and values of the forested wetlands impacted by the project without a restoration component. Forested wetlands impacted by the project would be cleared, graded, ditched, and backfilled during construction. Ultimately they would revert to emergent or scrub-shrub wetlands subject to periodic mowing and woody vegetation control. Because the project would result in a loss of forested wetland habitat, the Service recommends that the proposed mitigation plan be modified to include some restoration of forested wetlands. The acreage of restoration we would request would be at least equal to the acres of forested wetland permanently converted by the proposed project. During the February 13, 2002, conference call, Heidi Firstencel indicated that there may be opportunities to restore wetlands in the Orange County parcel as many of the areas mapped as wetland on the National Wetlands Inventory maps appeared to have been converted to uplands by the surrounding agricultural activity.

The Service generally considers preservation as part of a mitigation package that includes wetland restoration and creation and then considers whether the areas proposed for preservation provide wetland functions that are regionally important and similar to the functions that would be impacted by the project, are under threat of development, and/or are isolated wetlands that are not under the regulatory jurisdiction of the Clean Water Act.

Blasting

Millennium has recently stated that approximately 200 feet of the Haverstraw Bay crossing would require blasting. The Service acknowledges that the proposed mitigation measures would reduce the potential negative impacts, but believes that additional measures are warranted. Specifically, the Service recommends that Millennium assess the possibility of installing portable cofferdams and pumping the water from the area to be trenched, removing and stockpiling unconsolidated materials, and using a rocsaw to dig the trench. After installation, the trench should be backfilled with the stockpiled sediment and the cofferdams removed.

Summary

Based on the potential for significant and unacceptable impacts to aquatic resources of National importance resulting from the Millennium Pipeline, the Service maintains our objection to the proposed project. We would reconsider our position if:

1. The FERC and the Corps evaluate the wetland and waterbody impacts associated with alternatives that would avoid the Lake Erie crossing to determine whether the proposed route is the least environmentally damaging practicable alternative. This assessment should include a

"worst case" scenario assessment of potential acute and chronic impacts to aquatic resources resulting from pipeline leakage and rupture in Lake Erie.

2. If the Lake Erie crossing is permitted, Millennium should recapture drill muds from the shoreline directional drilling before they are released into the Lake Erie water column and employ mitigation measures such as bubble curtains and noise makers to encourage fish to move out of areas where blasting is necessary.

3. The FERC and the Corps evaluate the need for both the Millennium and Eastchester Pipelines to serve the New York City market and if the Millennium Pipeline is deemed necessary, whether one of the project alternatives would result in a reduction of impacts to wetlands and waterbodies relative to those associated with the Haverstraw Bay crossing. This assessment should include a "worst case" scenario assessment of potential impacts to the Hudson River resulting from pipeline leakage and rupture.

4. Millennium should provide updated alignment sheets that indicate that the project will avoid bog turtle habitat in Wetland 9, as described in the BA.

5. The Corps and Millennium identify opportunities for forested wetland restoration and confirm that the New York State Department of Environmental Conservation is willing to take possession and manage both sites.

6. If the Haverstraw Bay crossing is permitted, Millennium should avoid blasting in Haverstraw Bay and instead do the blasting "in the dry" as described above.

If you have any questions regarding this letter, please contact Alex Chmielewski of the New York Field Office at (607) 753-9334.

Sincerely,

A handwritten signature in black ink, appearing to read "David A. Stilwell". The signature is fluid and cursive, with the first name "David" being the most prominent.

David A. Stilwell
Field Supervisor

Literature Cited:

Patin, S.A. 1999. Environmental Impact of the Offshore Oil and Gas Industry. Ecomonitor Publishing. East Northport, New York

USFWS. 1997. Significant Habitats and Habitat Complexes of the New York Bight Watershed. U.S. Department of the Interior, Fish and Wildlife Service, Southern New England - New York Bight Coastal Ecosystems Program, Charlestown, Rhode Island.

**cc: NYSDEC, Albany, NY (Endangered Species Unit, Attn. P. Nye)
NYSDOS, Albany, NY (Attn. S. Resler)
NMFS, Highlands, NJ (Attn. S. Gorski)
NMFS, Milford, CT (Attn. M. Ludwig)
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EPA, Chief, Water Programs Division, New York, NY**